ENGINEERING NEWS-RECORD

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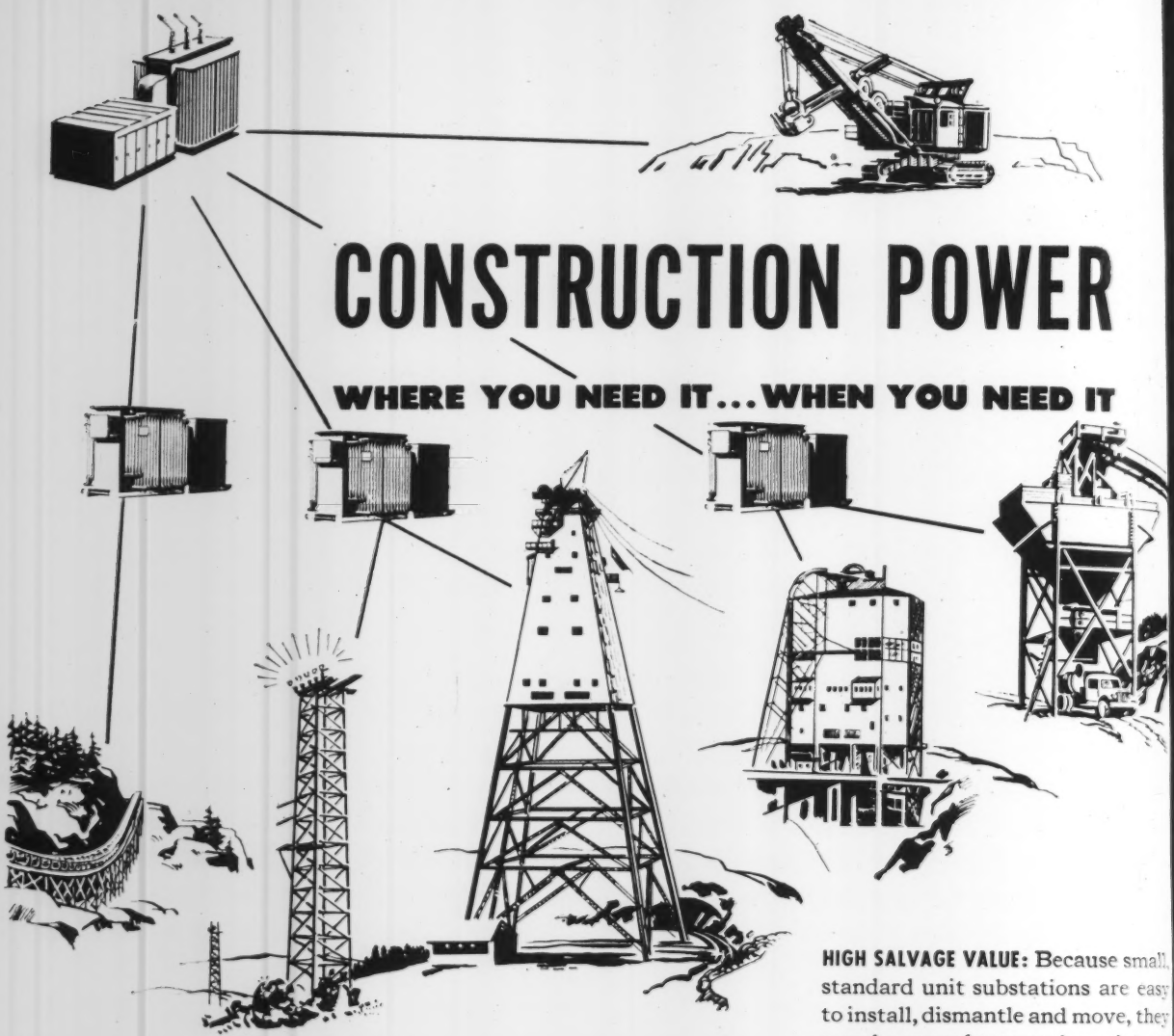
Steel bowstring truss bridge, recently completed, is a link across the Santiam River between Salem and Albany, Ore.



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ELECTRIFIED CONSTRUCTION

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News of the Week

ENGINEERING NEWS-RECORD • OCTOBER 9, 1947 • VOLUME 139 • NUMBER 15

Fleming foresees increased construction for next year

FWA chief tells Producers Council that public building should reach $3.7 billion, private work $9.8 billion in 1948—Others see increase ahead

Public construction in 1948 should reach a total volume of $3,700,000,000, Maj. Gen. Philip B. Fleming told the Producers Council at its annual meeting in New York City Oct. 1-3. This would be an increase of 30 percent over this year, General Fleming said.

The great bulk of this work will be done by the states and local communities rather than the federal government, Gen. Fleming added; federally-financed construction will increase at a slower rate.

"On the basis of $9,800,000,000 of privately-financed construction in 1948, public construction will approximate 27 percent of the construction market in 1948," the federal official said. "This is really but a slight increase over the 24 percent relationship expected this year. The proportion of public construction is still well below the one-third sector which was the average in the decades prior to the war. This is a clear indication that housing and privately-financed construction are getting definite priority."

(The Department of Commerce, in a report issued Oct. 2, said that value of new construction put in place during September was estimated at $1,262,000,000, which is an increase of 2 percent over revised figures for August and a gain of 18 percent over September, 1946.)

Speaking to an audience that heard statements by others that the postwar recovery of construction volume is again making itself felt and that the general volume of construction is on the upgrade, General Fleming said that total public construction during 1947 would reach $2,900,000,000, of which $1,700,000,000 would be financed by states and local communities. In addition to these actual figures, there is a backlog of $2,300,000,000 worth of public construction represented by the advance planning program of the Bureau of Community Facilities. The advance planning program terminated June 30, an appropriation of $65,000,000 having been utilized to develop the backlog of local public works throughout the country.

In another part of his address, the FWA Administrator advocated passage of legislation now before Congress to authorize a fund of $100,000,000 a year to be lent to states, cities and industrial enterprises for stream pollution abatement.

See construction recovery

John L. Haynes, chief of the Construction Division of the U. S. Department of Commerce, forecast that the dollar volume of construction in 1948 would exceed that of 1947.

Supporting Mr. Haynes' statement, David S. Miller, newly elected president of the Producers' Council, urged producers to bring costs down. Cost reduction, he said, is the key to a high level of building activity.

One way of lowering costs was pointed out by William J. Levitt, president of Levitt and Sons, Inc., New York City, who said better home values can be obtained through improvement of the system of distributing building products which now permits "several factors" to add profits that could readily be eliminated.

Other speakers

Other speakers at the three day meeting included Albert E. Paxton, publisher of *Engineering News-Record*; Earl Bunting, president of the National Association of Manufacturers; Charles T. Cellarius, treasurer, and Walter A. Taylor, director of education and research of the American Institute of Architects; George N. Thompson, assistant chief of the Building Technology Division of the National Bureau of Standards; Frederick M. Feiker, dean, school of engineering, George Washington University, and Tyler S. Rogers, ex-president of the council.

Other officers elected, in addition to Mr. Miller, included: F. L. Riggin Jr., first vice-president; C. R. Raquet, second vice-president; C. A. Snyder, secretary; and W. V. Peters, treasurer.

Chicago Sanitary Dist. readvertises sewer job

At a special meeting on Sept. 19, the trustees of the Chicago Sanitary District rejected all bids received for sections 3 and 4 of the South Side interceptor sewer and voted to readvertise the job on a national basis. Bids will be accepted up to the time of the new opening on October 23.

At the original opening on Sept. 12, a combined bid of $23,062,210 for the two sections was low. This bid, presented by the S. A. Healy Co., Chicago, and Peter Kiewit Sons Co., Omaha, joint venturers, included $12,650,110 for contract 3 and $10,520,400 for contract 4. According to one of the trustees, the combined bid exceeded the engineers' estimate by $5,400,000.

Construction of the two sections now up for bids calls for tunneling in air.

Veterans sue government over home price rise

Three World War II veterans last week filed suit in Minneapolis, Minn., federal court, seeking declaratory judgments against two federal housing officials for permitting increases in the prices of their homes.

Seen by court attaches as a possible precedent-making action, the suits were filed against Harold Farley, state Federal Housing Administrator, and Frank Creedon, head of the federal government's housing effort. The prospective home-owners asked the court to declare invalid an order issued by Farley which increased the ceiling price on certain homes, and asked an injunction to prevent any additional increases.

The veterans complained that the order resulted in raises of up to $2,200 in the price of their homes.

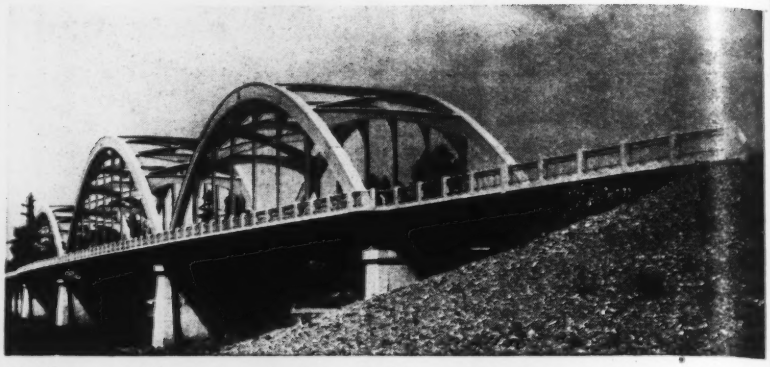
NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Construction—The New England Foundation Building Co. was low bidder at $512,000 for construction of the first permanent part of the terminal building of the Logan International Airport, *East Boston, Mass.* . . . The *Washington* State Department of Public Institutions will receive bids until Nov. 3 for construction of a $2,500,000 male ward at Western State Hospital, *Fort Steilacoom* . . . Dredging of the new 5½-mi. cutoff channel across *Chesapeake Bay* is about 80 percent completed and the channel should be ready for use this month . . . The *Oregon* State Board of Control has approved preliminary plans for a $2,000,000 state office building . . . The Kentucky state hospital plan, approved by U. S. Public Health Service, calls for construction of hospitals and additions in twenty cities. . . . VA has announced approval of a 19.5-acre site for a 500-bed veterans hospital in *Indianapolis, Ind.* . . . Turner Construction Co. will build a beer can factory of 430,000 sq. ft. on a 50-acre site at *Hillside, N. J.*, for the American Can Co. . . . Buffalo Niagara Electric Corp. will build a $10,000,000, 80,000-kw. steam generating station in *western New York* . . . A total of over $1,000,000 in contracts has been awarded for a new high school for *Edina* and *Morningside*, suburbs of *Minneapolis, Minn.* . . . Work has begun on a $2,000,000 Ansco film plant at *Binghamton, N. Y.* . . .

Sewers and Water Supply—*Bellingham, Wash.*, will vote Dec. 6 on a $1,000,000 sewer improvement and extension program. . . . Construction of the $2,000,000 Beaver Creek sewer extension project at *Albany, N. Y.*, has been postponed in order to avoid tearing down 18 residential and commercial buildings during the housing shortage, Mayor Corning announced. . . . A plan has been submitted to the city council of *Salem, Ore.*, for a $1,445,000 sanitary trunk and lateral sewer system and a disposal plant. . . . The Washington State Dept. of Health has approved a $520,000 pumping station for *Spokane*. . . . A Circuit Court suit was filed Sept. 27 to clear the way for sewers costing $2,000,000 to serve 3,000 homes in St. Matthews, near *Louisville, Ky.* Don E. Bloodgood, professor of sanitary engineering at Purdue University, reported that in a 6-month check at one *Indiana* condensed milk plant it was found that waste turned into the sewers was valued as high as $916 daily.

Housing—Edgar G. Johnson has plans for a $1,500,000 apartment project at *Seattle, Wash.* . . . Construction of a 60-home development in the Irvingwood area of *Chicago, Ill.*, is well under way . . . A $2,000,000 program of 75 housing units in *Glencoe, Ill.*, has been announced. Architect is James C. Schnur, Winnetka, Ill. . . . During 1947, so far the *Miami, Fla.*, area has gained more than 7,500 living units, about 6,000 separate dwellings.



***Highway Bridge**—Another link in Oregon's highway system is this steel bowstring truss structure across the Santiam River between Salem and Albany. Costing $355,000, the bridge has a 240-ft. center span and side spans of 180 ft. The structure was designed for AASHO H20-S16 loading, and carries a 30-ft. roadway with 3½-ft. sidewalks on either side.*

States push road construction plans

With an eye on the approaching annual winter shutdown, many states last week reported efforts to speed up highway building.

The Illinois State Division of Highways opened bids on highway improvement projects in 37 counties to cost a total set at about $6,170,000. The work includes several hundred miles of road construction, including resurfacing and patching. The Nebraska state highway department announced that it now has under contract 833 miles of federal aid highway and urban roads, at a cost of more than $13,000,000.

About one-half of the Michigan State Highway Department's three-year construction program, started in 1946, has now been placed under contract, according to Charles M. Ziegler, commissioner. He said that $41,000,000 worth of construction work on the trunk line system has been placed under contract.

In Oklahoma, H. E. Bailey, highway director, announced that the state's long delayed urban road program will soon get under way. He said that the program had been delayed on account of a policy requiring cities to furnish all rights-of-way for state roads.

At Memphis, Tenn., the Memphis and Arkansas Bridge Commission decided to proceed with completion of the Mississippi river bridge at Memphis at a cost of more than $13,000,000—some $5,000,000 more than the original estimate on the project.

The 300-ft.-long, 4-lane superstructure over the river was awarded to Harris Structural Steel Co. of New York, on a bid of $4,606,000. In November, 1945, a bid of $3,260,000 was rejected as too high.

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AGC agrees to sponsor reserve units for Army engineer utilization

Plans adopted at fall board meeting at Des Moines call for organization by various association branches—Student chapters to be revived in engineering schools—Taft-Hartley act seen puzzle

Upon invitation by the War Department, the Associated General Contractors of America will sponsor and help organize 100 affiliated reserve construction units of various types and strengths. Favorable action on the plan was taken at the meeting of AGC Governing and Advisory Boards held at Des Moines, Iowa, Sept. 29-Oct. 1, after the program was outlined by Col. Robert J. Fleming, Jr., and Major Robt. M. Shannon, Jr., of the Office of Chief of Engineers.

The units will range from headquarters companies to full-strength engineer aviation and engineer construction battalions. While details have not yet been worked out, the groups will probably be organized by the various AGC chapters and branches under the supervision of the district engineers, Corps of Engineers. Reserve commissions will be given the unit officers and enlisted men will be held under reserve status. Some military training will be necessary, but such training periods will be set up to interfere as little as possible with normal construction operations.

Col. Fleming stressed the point that this program is not part of the National Guard. Units cannot be called to service by the states, and will be used only by the federal government in time of national emergency. All officers personnel will be selected by the sponsors.

Outline educational trend

Construction education received considerable attention at the meeting. Dean R. M. Green of the College of Engineering, University of Nebraska, and Prof. M. I. Evinger, head of civil engineering at Nebraska, outlined the trend in construction education and sought cooperation of the contractors in summer employment of interested students. The AGC plan of sponsoring student chapters in various engineering schools, started some years ago but dropped during the depression, will be revived. The contractors were also asked to aid in supplying lecturers and teaching material for construction courses.

Much time at the meeting was devoted to discussion of how the Taft-Hartley act affects construction. The longer the subject was discussed, the more the delegates became confused. One fact did stand out, however, and that is that the act's provisions for procedure in labor disputes were never designed for the construction industry. The fact that contractors deal with several unions, repeatedly build up and tear down their labor forces, seldom on a closed-shop basis, all contribute to the complexity of the problem. The matter of union elections to determine bargaining representatives is alone a perplexing problem, especially if NLRB insists elections be held on individual employer basis.

The contractors are eagerly watching the outcome of the course to be taken by the Building Trades Dept., AFL, at the current labor convention in San Francisco, especially as to handling of jurisdictional disputes. Dissent within the Building Trades Department has prevented action being taken under the plan for ending such disputes announced by President Truman last spring.

Following a survey and recommendations made by the G. M. Basford Co. on a future public relations program for AGC, a plan for such activities for the next year or so was announced. The program will include more news releases, greatly-increased information service to members, selling the AGC and its aims and purposes to prospective members and to those responsible for awarding contracts, and a small advertising schedule.

Under combined action of the public relations and membership committees, the association membership has greatly increased in the past two years, now standing at 4,365. There are now 101 chapters and branches, and several more are being organized.

Continuation of federal aid and congressional support for a sustained highway program was urged by resolution after the convention heard Congressman Paul Cunningham, chairman of the House Subcommittee on Roads.

Changes in certain Bureau of Reclamation specifications are now being studied.

Dwight W. Winkelman, head of D. W. Winkelman Co., Syracuse, N. Y., was nominated for president for 1948. He is now vice-president. Adolph Teichert, Jr., of A. Teichert & Son, Inc., Sacramento, Calif., was nominated for vice-president for next year. Both nominees will take office at the AGC annual convention to be held next Feb. 9-12 at Dallas, Tex.

Traffic engineers list congestion cures

Problems of handling and controlling traffic in the face of an ever increasing number of vehicles on the highways occupied the Institute of Traffic Engineers at their 18th annual meeting in Detroit last week.

A concensus of the discussions and conclusions was largely contained in a resolution which dedicated members to: (1) Utilizing streets and highways to a maximum until such time as traffic relief and construction of urban expressways are possible; (2) providing the public with a maximum of safety and a minimum of annoyances and irritations; (3) providing technical guidance and stimulation to municipalities, civic organizations, and the business communities in developing adequate terminal facilities, and (4) furnishing the press and radio with facts and information on traffic problems and solutions so information can be properly interpreted for the public.

The opening technical session was led off by H. E. Hilts, deputy commissioner in charge of design for the Public Roads Administration, who discussed the program of the President's Highway Safety Conference of 1947. Frank C. Eisenach, traffic control engineer for the Michigan State Highway Department, reported that a few states are making experimental use of colors in route directional markings.

Other sessions concentrated on parking problems. Wallace Richards, executive officer of the Pittsburgh Regional Planning Assn., said his city had solved its emergency parking problem by creation of a parking authority.

Roy John, managing director of the Associated Retailers of Indiana, suggested establishment of a parking division in the U. S. Public Roads Administration, with proper facilities for research, planning and administration of field activities; establishment of a parking survey and counseling division in each state highway department operating jointly on state and federal funds.

The opening session elected Robert A. Mitchell, traffic engineer of Philadelphia, as president. Other new officers are: Wilbur S. Smith, associate director of the Yale Bureau of Highway Traffic, and Harry E. Neal, traffic engineer for the state of Ohio, vice-presidents; and Fred W. Hurd, of the Yale Bureau, secretary treasurer.

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Begin housing program for Ruhr industrial workers—British plan construction of aluminum alloy bascule bridge—Argentina orders improvement of sanitary system in Buenos Aires

Germany—Although many of its features are uncertain and still provoke controversy, a 2-year housing program for the Ruhr district is finally under way.

A first-year schedule, which became effective in July, includes the repair of 27,540 units damaged up to 15 percent; repair of 20,400 units damaged up to 40 percent; new construction of 780 dwellings of standard type; adaptation of 646 attics; construction of 17 barrack-type structures for single miners, and the construction of prefabricated houses. A supplementary program following the same pattern has been laid out for the second year.

The second-year program includes prefabricated housing to provide about half the dwelling space to be made available. To implement the program, a monthly coal allocation of 28,000 tons was made exclusively for use in constructing housing for Ruhr miners—5,000 tons being earmarked for steel requirements—but as of the end of September no deliveries had been made.

As matters now stand, administration and financing are to be handled by the government of North Rhine-Westphalia—the province containing the Ruhr. However, a newly created mine authority may assume the financing of repair of mine-owned dwellings and new construction on mine-owned properties—a program that would account for about 40 percent of all mine dwellings.

Observers feel that the solution will not be entirely satisfactory to any of the groups who have considered the problem of obtaining shelter for miners—a problem so important as to be considered, along with food, the key to vitally needed increase of production of coal. The prefabricated housing idea has been pushed by the U. S. Military Government, against British resistance. The British see the program as cutting into the lumber exports that they have been getting from Germany. Of lesser importance is the fact that prefabricated housing meets a certain amount of German resistance, due to strong tradition for permanent-type structures.

Nevertheless, a small beginning has been made, and 1,000 dwelling units are scheduled to be produced in the first year. The houses admittedly are not good, and are still in the experimental stage. One type is of all wood construction and the other of mixed construction, using light concrete.

Recent reports by Robert Moses, New York City Park Commissioner, who acted as a consultant to AMG, and Prof. Walter Gropius of Harvard University, recommended that the dwelling units be constructed by the mine administration, and should make use of rubble and brick as a construction material. Due to the extreme shortage of materials and the urgency of the housing problem, Professor Gropius said he believed the use of rubble to be sound in the beginning, whether economical or not. However, he said the problem deserves more study before it is considered as a long-range practice.

Bridges....

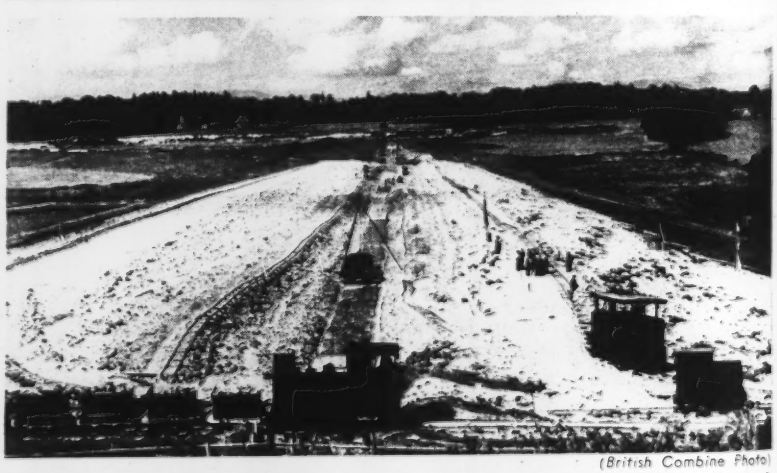
England—What British engineers believe may be the first aluminum alloy bascule bridge in the world will be erected in the harbor at Sunderland, on the northeast coast of England just south of Newcastle, according to the River Wear Commission, which recently ordered the structure.

The twin-leaf rolling trunnion bascule will replace an old swing bridge spanning the slip between two docks in the port area, to provide a clear waterway of 90 ft. The new bridge will carry a 9-ft. paved roadway, including a single railway track with paved surface, and two sidewalks, each 4 ft. 6 in. wide, to give a total bridge width between trusses of 18 ft. 6 in. The structure has been designed to carry a moving load of 70 tons.

Transport....

Mexico—The Mexican government, through its National Railways—Mexico's largest rail system—is spending $7,350,000 this year on railroad construction, according to an announcement by the Mexican railroad workers union.

Of the outlay, $4,100,000 is being spent to complete the 50 kilometers lacking to finish the southeastern railway, started in 1937, to link Mexico City with rich but isolated Campeche and Yucatan States. About $1,450,000 is being spent for a road to connect Sonora State and Lower California



(British Combine Photo)

***British Water Supply Dam**—Houses, fields, and woods in the quiet valley of Darwell Hole, between the East Sussex villages of Mountfield and Netherfield will have disappeared by the winter of 1948 under the waters of a new reservoir, to be one of the largest in southeast England. Built by the Hastings Corporation, at a cost of more than $1,600,000, the reservoir will cover some 160 acres. The dam structure, excavation for the corewall of which is shown above, is built in the bed of the River Darwell.*

Territory in the Mexican Northwest, and $1,100,000 is being spent to extend the railroad from Iguala, in Guerrero state, to Acapulco, the Pacific coast port-resort, and to push a branch line from Nueva Italia to Zihuatanejo, another port on the Pacific.

England—Despite a half-century of opposition, the Channel Tunnel Co. held its regular annual meeting at London recently and reiterated to the people of Britain and France the advantages of a tunnel under the English channel to connect the two countries.

Sir Herbert Walker, chairman of the Tunnel Company, declared that the proposal is today more attractive than at any time since it was proposed nearly 80 years ago.

Estimates prepared by the company before the outbreak of the war said that the tunnel should be driven from a location between Dover and Folkestone on the southern British coast to a point near Wissant, near Boulogne and Calais in France. The tunnel would be about 31 miles long, including more than 20 miles under the open sea, and its estimated cost at prewar figures was between $100,000,000 and $120,000,000. The plan calls for two tunnels, about 20 ft. in diameter, 50 ft. apart, and connected by frequent cross galleries.

England—London's biggest subway extension since the war is nearing completion east of Leytonstone, where the Central Line is being extended seven miles to reach Woodford and Newbury Park. Track laying has been completed between Leytonstone and Newbury Park, where the line runs through a 4-mile tunnel, and work crews are now engaged in finishing stations, plastering, tiling, installing stairways and signalling devices. Tunnels for the new extension were finished early in the war, but an aircraft component factory was installed there to protect it from enemy air raids.

Public Works . . . .

Argentina—The Argentine government, through its executive branch, recently authorized two large construction projects, although it made no details available on execution plans.

One of the projects is the extension and improvement of the sanitary system of Buenos Aires and districts adjoining the capital, t a cost of about $150,000,000. The authorization specified that the cost figures should include water connections, sewage and rain water drainage, electric power plants, installation of pipelines and other work necessary to comply with an overall improvement program for the capital city. Calls for bids on this work will not be made until engineering plans are completed by the Department of Public Works.

A second project, the erection of a $50,000,000 University and school center, was also approved.

Photo by British Combine

***Swedish Airport**—Swedish government officials are rushing work on the reconstruction of the Bromma airport to accommodate international and local flights with complete service for planes, passengers and cargo. Seen from the air, the O-shaped section of buildings will include in the upper tier an office building, shops, four hangars and a garage, and in the lower foreground a customs house and administration building. At the extreme left of the picture is an office building for Sweden's government-owned airline.*

Venezuela—The Venezuelan government will participate financially in the construction of a $6,000,000 tourist hotel in the Las Mercedes section of Caracas. The hotel, which is to be built by the Inter-Continental Hotels Corp., will contain 400 rooms and 40 bungalows.

Irrigation . . . .

Australia—The new South Wales Water Conservation and Irrigation Commission announced recently that it will bring an expert from the United States to advise it on the construction of the Glenbawn and other proposed irrigation dam projects. Glenbawn Dam, to be built on the Hunter River, will be an earth-fill structure and U. S. assistance is sought because of superior American experience in construction of such dams, the commission said. The dam would cost about $5,000,000, engineers report.

Rapidly nearing completion after several years' suspension of work, Stirling Dam in Western Australia will soon be ready. The dam is said to be the highest earth dam in the commonwealth.

Located 90 miles south of Perth on the Harvey River, the structure will rise to a height of 158 ft. above the stream bed. Water backed up by the dam will be used for an irrigation area of 16,500 acres in one of the most fertile portions of western Australia.

Miscellany . . . .

Venezuela—Leopoldo Martinez Olavarria has succeeded Rafael Vegas Leon as director of the Venezuelan Workers Bank. Martinez Olavarria is a civil engineer, and for nine years was head of the municipal public works in Caracas. The bank, an affiliate of the Venezuelan government, loans money for building purposes and is now financing a huge workers home project for the government.

Puerto Rico—The Puerto Rico planning board has approved a number of public improvement projects to be undertaken by different government agencies during the current fiscal year, including a $200,000 street construction and repair program at San Juan.

Correction—An article in the Sept. 25 issue, vol. p. 425, detailing construction of Rossens Dam on the Sarine River near Fribourg, Switzerland, contained a typographical error in a paragraph concerning the proportion of concrete mix.

The article should have said that between 5½ and 6 bags of Portland cement are used per cubic yard of concrete for construction of the dam.

Farm group opposes Idaho-Oregon power dam

Charging that the construction of the proposed $20,000,000 Oxbow Dam on the Snake River would interfere with the flow of needed irrigation waters, the Oregon State Grange last week opposed construction of the structure. Grange representatives were seconded by representatives of federal agencies and the State Highway Commission at a public hearing held by the State Hydroelectric Commission.

The proposed dam, to be built by the Idaho Power Company (*ENR* July 17, Vol. p. 94) would be located on the section of the Snake River that forms the border between Idaho and Oregon, 135 miles upstream from Lewiston, Idaho. The dam would be a concrete arch structure, providing an effective head of 120 ft., and the project would include a tunnel and a power plant to be located on the Oregon side of the river three miles downstream from the new dam.

Grange representatives said that the dam would not provide water storage for the low water flow during the summer months.

J. L. Devers, attorney for the State Highway Commission, said the proposed dam would inundate a large section of the Baker-Homestead highway, but added that the objection would be withdrawn if the power company would agree to pay damage caused to the highway.

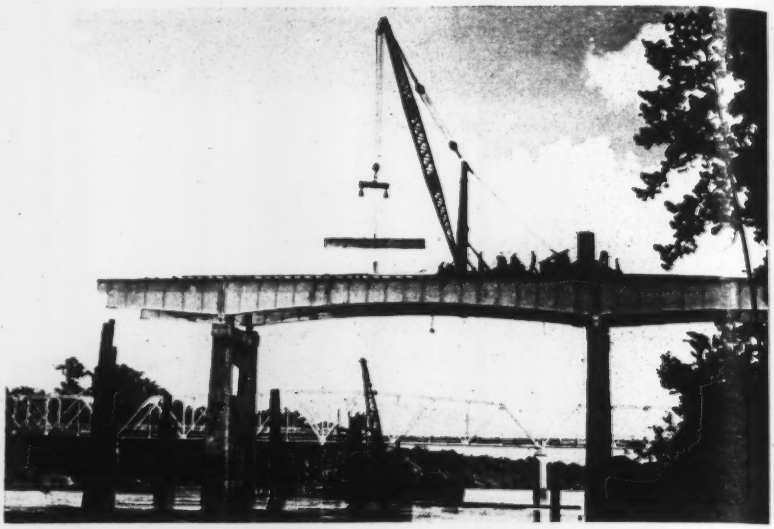
The Department of the Interior and Army engineers objected on the ground that the project would conflict with federal power plans for the area. Army engineers pointed out they propose to construct a development downstream at Hell's Canyon, which would flood the Oxbow plant when completed.

Approve Rio Grande Dam

The Federal Power Commission last week had granted a license to the Maverick County Water Control and Improvement District authorizing construction and operation of the part of a proposed dam across the Rio Grande on the United States side of the international boundary. The dam site would be about 42 miles above Eagle Pass, Texas.

The structure would raise the water level by 4 ft. at the intake to the District's gravity diversion canal so that 1,500 cfs. can be diverted for irrigation and power generation.

The dam would be rock filled, about 9 ft. high and 440 ft. long and would have a protecting earth levee about 2,910 ft. long across low ground on the United States side of the river.



***Long Bridge**—Piney Bluff Bridge, spanning the Altamaha River on U. S. Highway 1 between Baxley and Lyons, Ga., will be one of the longest bridges in the state. The $1,500,000 improvement, including approaches, is 13,115 ft. long. The bridge will consist of steel girder spans on concrete piers and a series of concrete girder spans on concrete pile bents, for a total bridge length of 4,087 ft., carrying a 28-ft. roadway. The new structure will replace a wooden-floor structure and swing span built in 1927. The Nashville Bridge Co. holds the steel erection contract, and Scott Construction Co. of Thomaston, Ga., has the bridge contract. J. G. Brock is resident engineer for the Georgia State Highway Department.*

Start training course in concrete making

Establishment of a training course in the fundamentals of concrete making and concrete construction practices for technical personnel of both the Portland Cement Association and its member companies has just been announced by Frank T. Sheets, president of the association.

John A. Ruhling, who has been manager of the association's housing and cement products bureau since 1944, has been appointed manager of technical personnel training. Carl A. Menzel, research engineer with the association since 1928, has been appointed to succeed Ruhling as manager of the housing and cement products bureau.

The training course, to be conducted in 13-week periods has a dual purpose according to President Sheets.

"Not only will this intensive training in modern construction practices help new men on our staff to serve the public more effectively," Mr. Sheets said, "but it also will enable them to develop into positions of greater responsibility more rapidly.

The new training course is part of a greatly expanded research, development and educational program recently announced by the association.

Publish supplement to commodity directory

A supplement to the National Directory of Commodity Specifications has been announced by the National Bureau of Standards.

The 1945 edition of the directory, with this supplement, now provides a complete listing, by name, designating number, and issuing or sponsoring organization, of all the standards, specifications, and methods of test in general use for commodities produced in or purchased by this country. These publications, which were prepared to meet the growing demand for an up-to-date authoritative compilation of such data, also include many items that are not strictly commodity specifications but closely related information essential to most users. Each of the 44,000 specifications is briefly summarized as to technical characteristics, scope, and special applications.

The supplement was prepared by Paul A. Cooley, Division of Codes and Specifications, National Bureau of Standards. Copies of the directory (Miscellaneous Publication M178) and its supplement may be obtained for $4.00 and $2.25, from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Army plans to ask construction bids for 17 additional VA hospital jobs

Plans being revised to make allowance for higher costs and fund limitations—Plan extensive work on Soldiers' Home

The Corps of Engineers will ask bids on 17 additional hospitals for the Veterans Administration before Jan. 1, 1948, Lt. Gen. Raymond A. Wheeler said last week.

General Wheeler said that architect-engineers are now revising plans and specifications for these structures to bring them within the cost and cubage limits necessitated by rising costs and limitations on appropriated funds. As soon as revisions are completed, the individual projects will be advertised.

Tentative dates have been set for advertising for bids on three hospitals: the 450-bed general medical structure at Shreveport, La., during the month of October; the main structure of the 1000-bed general medical hospital at Buffalo, N. Y. set for about Oct. 15, and the 200-bed general medical hospital at Grand Island, Neb., set for about Oct. 13.

(The New York district engineer's office last week added that it will advertise for bids on a 1000-bed hospital at Albany, N. Y., about Dec. 10, and for another hospital at Newark, N. J., about Dec. 3.)

Other hospital designs under revision for early advertisement include: Altoona, Pa.; Beckley, W. Va.; Big Spring, Tex.; Clarksburg, W. Va.; Erie, Pa.; Fort Wayne, Ind.; Iron Mountain, Mich.; Little Rock, Ark.; Omaha, Neb.; Poplar Bluffs, Mo.; Wilkes Barre, Pa.; and Wilmington, Del.

Order redesign

Meanwhile directives have been issued calling for complete redesign of some 37 hospitals, including a 750-bed hospital at Cincinnati, Ohio; 500-bed hospitals at El Paso, Tex., and Durham, N. C.; and a 1000-bed neuropsychiatric hospital at Gainesville, Fla.

At Jefferson Barracks, Mo., the corps recently opened renegotiations for an entirely new design involving a 500-bed addition to the existing hospital only. The corps is also applying new limitations to the designs of the 500-bed tuberculosis hospital at Detroit, Mich.; the 1000-bed general medical and surgical hospital at Boston, Mass.; the 1000-bed neuropsychiatric hospital at Toledo, Ohio; the 1200-bed neuropsychiatric hospital at Pittsburgh, Pa., and the 200-bed general medical and surgical hospital at Spokane, Wash.

Uncertainty as to sites has caused the suspension of work on the designs for the 750-bed general medical hospital at Washington, D. C.; the 1000-bed general medical and surgical hospital in New York City and at Syracuse, N. Y.

Meanwhile, partial construction contracts have been let on the two 1000-bed general medical and surgical hospitals at Albany and Buffalo, N. Y., and complete contracts for the Fort Hamilton, N. Y. 1000-bed and Fresno, Calif. 250-bed structures—both general medical and surgical institutions.

Work on soldiers' home

In a parallel announcement, the corps said that it will make immediate improvements costing $355,000 to the U. S. Soldiers' Home at Washington, D. C. At the same time, Porter and Lockie, Washington architect-engineers, are proceeding under the direction of the corps with preparation of a master plan for rehabilitation and expansion of the home. An estimated expenditure of $10,000,000 is contemplated for the fiscal year 1949. Immediate work will include air conditioning of the Home's auditorium; construction of a new incinerator, expansion of laundry facilities; changeover of power generators and other work, considered immediately necessary.

GOOD BUILDING CODES SAVE HURRICANE DAMAGE

Revision of the Florida state building code twenty years ago was credited last week with saving a great deal of property and many lives during the recent hurricane in Florida.

Addressing the annual meeting of the Producers' Council in New York, Maj. Gen. Philip B. Fleming, Federal Works Administrator, told his listeners:

"The storm damage to buildings was confined to flimsy structures. In Florida, where they had two bad blows twenty years ago, they revised their building codes, and the buildings built since then have been well constructed and of approved materials. These buildings rode out the storm intact. In Mississippi, however, where there has not been a hurricane for 40 years, many tourist camps and other buildings of flimsy construction went down before the wind and there was unnecessary loss of life."

Building trades increase apprentice training

The number of apprentices in the building trades continued to increase, with 104,285 being employed at the end of August, it has been announced by the Apprentice-Training Service, U. S. Department of Labor.

While some of the construction crafts showed a slight decrease, this was more than counterbalanced by gains in others, especially the woodworking trades which increased rapidly.

For Canadian Power—*Engineers of the Hydro Electric Power Commission of Ontario expect that their new Stewartville development will be in operation by the spring of 1948. The $10,600,000 development started in 1945, and will include a concrete-gravity dam with a maximum height of 200 ft. and a length of 850 ft., and a power installation of 81,000 hp.*

HIGHLIGHTS OF MUNICIPAL DEVELOPMENTS

Summarizing current activities in city engineering and construction throughout the country

Urban building booms—Cities advance highway, street, parking plans — Hartford, Toledo, Minneapolis go into housing work — Seek higher wages for engineering personnel

Spotlighting the increasing problems of municipal engineers last week was a report from the U. S. Department of Labor's Bureau of Labor Statistics which showed that the dollar value of urban building construction increased 10 percent from June to reach a July total of $534,000,000—the highest amount recorded in any month since 1942.

For the first seven months of 1947, BLS said, city building construction totaled $2,800,000.

Private housing registered a 10 percent rise in valuations in the first seven months of this year as compared with 1946. This rise occurred largely as a result of increased costs, and partially due to more expensive types of dwellings being constructed.

A disturbing factor, according to the report, is that one-family as well as apartment and rental housing is gaining outside city limits and in smaller communities. In July, 45 percent of all non-farm housing started was in suburban areas, as compared with 40 percent earlier in the year, increasing the problems now faced by many communities of supplying essential services to outlying areas newly built up under the impetus of the drive for housing.

Enter housing field

Three municipal ventures into the housing field were reported last week.

Of considerable interest was the action of the Minneapolis, Minn., city council which at a special meeting voted approval of construction of 167 prefabricated housing units, to be ready for occupancy within 60 days. Councilmen acted under authority of a recent election, in which voters approved a $2,000,000 bond issue to finance the project. Approval of the prefabricated housing came after a stormy session, in which labor leaders and others opposed the prefabricated structures on the ground that permanent construction could be done as quickly.

The council awarded a contract for 147 units to the Madsen Construction Company of Minneapolis, for construction of $3,643 units and the Lovering Construction Company of St. Paul was given a contract to put up ten duplex dwelling units at $10,300 each. Councilmen indicated that they will accept bids later on more prefabricated structures.

At Toledo, Ohio, the City Housing Board began a campaign to borrow $200,000 from local industries and individuals to finance a cooperative building to alleviate the city's housing shortages. In a series of letters the board pointed out that it would acquire land, contract for construction of low-cost houses, and sell them to low-income groups in metropolitan Toledo, with financial institutions financing 70 percent of the cost.

At Hartford, Conn., the local Redevelopment Agency took over Hartford's housing plans for veterans and agreed to supervise construction of 600 dwelling units.

Seek pay raises

Faced with a slowdown in preparation of plans for needed improvements to street systems, officials of two cities last week were presented with recommendations for raising the pay of engineers. At Columbus, Ohio, City Engineer Paul W. Maetzel and Service Director Elmer A. Keller asked that engineering salaries be revised upward so that the city's street and sewer programs can be speeded.

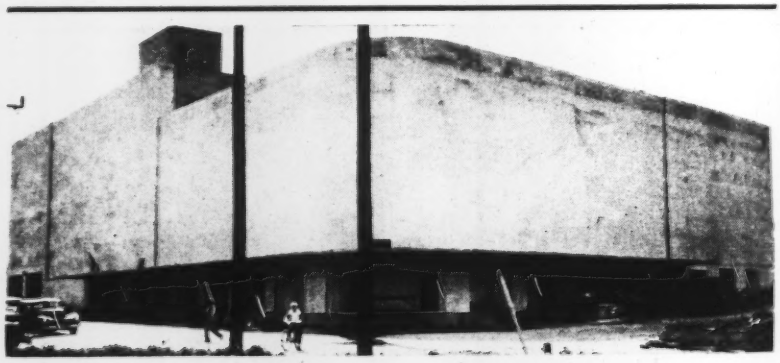
Mr. Maetzel recommended salary revisions to bring draftsmen from $196 to $223 a month; junior engineering aides from $168 to $190 a month, and civil engineers from $256 to $311.

At San Diego, Calif., the city engineer's office distributed bulletins offering immediate civil service appointments for draftsmen-engineers, following sharp criticism by the city council that civic improvements were being "bottlenecked" in the engineering department.

Street, traffic plans

With congestion continually growing on city streets, solutions for the problem were many and varied, and continued to come in at a rapid pace last week. Among the plans were:

Construction of a $2,000,000 two-story garage and helicopter terminal over the tracks of the Boston & Albany Railroad in Back Bay, Boston, to accommodate more than 10,000 automobiles and 50 aircraft; a proposal by



Windowless Department Store *— Now nearing completion at Silver Spring, Md., is a 4-story department store building that is windowless, except for the ground floor display windows. Built for the Hecht Co., the structure measures 150x246 ft., but its fourth floor is only about half the size of the other floors, although the design provides for completion of this floor and addition of a fifth floor if needed. The frame is of reinforced concrete with typical column spacing 24 x 25 ft., the floors are of pan construction. Exterior walls are granite at sidewalk level and limestone for upper floors. Few interior walls are used except to enclose necessary utilities. James L. Parsons, Jr., Washington, D. C., was the general contractor for the $1,750,000 structure, for which Abbot, Merkt & Co., New York, was architect-engineer.*

Mayor George L. Denny of Indianapolis, Ind., that "needlessly wide" pedestrian sidewalks in the downtown area be narrowed to provide more driving and parking space; the announcement that the city of White Plains, N. Y., will spend $25,000 to buy a municipal parking lot on South Broadway to accommodate some 221 cars.

At Danville, Ill., a local newspaper began a campaign calling for the reconstruction of the entire highway bridge system leading into the city over North Fork, the Vermillion River, Stony Creek, and other streams, claiming that present communications are inadequate and unsafe.

At Baltimore, Md., Mayor D'Alesandro threw the weight of his administration on the side of a proposed express highway across the city, by approving a bill presented to the city council calling for allocation of $300,000 for preparation of detailed designs, plans and specifications for the first section of the proposed road.

Iowa City, Iowa, announced it had started an extensive survey of traffic entering and leaving the city to serve as a basis for a long range highway program which may mean rerouting Highway 6 and other heavily traveled highways into and around the city.

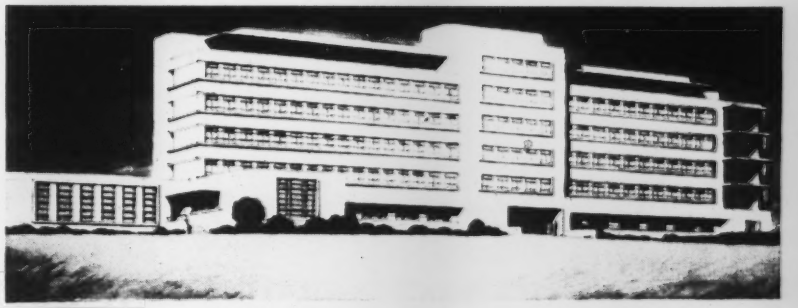
At Dayton, Ohio, city officials were told that they must spend $1,156,000 to build the proposed First-Salem bridge—a figure that would use up almost the entire bond issue approved in 1945 to finance construction of two bridges.

Sewage works plans

If the city of Newport, R. I., adds to and improves its present sewage plant to meet pollution abatement requirements, they must spend between $1,000,000 and $2,000,000, according to estimates presented to officials by the Boston, Mass., engineering firm of Metcalf & Eddy. The engineers said that if only a chlorination plant were required, the cost would be about $500,000. Construction of an entirely new outlet and completion of other projects outlined nearly ten years ago and partially built, would cost about $8,850,000 for completion.

Wilmington, Del., faced an order from the Delaware State Board of Health directing the city to immediately begin steps to install necessary interceptor sewage and sewage treatment plants in order to correct the present pollution of the Delaware River. City Councilmen explained that a survey commission is already at work on the problem.

Columbus, Ohio, asked Sanitary Engineer Orris F. Bonney and Franklin County Sanitary Engineer Grover F. Clements to begin preparations of a master city-county sewage plant with an eye to the needs of Columbus 50 years hence. Bonney said that the city plans eventual expansion of its sewerage service to include an additional 86 sq. mile area by 1960.



***Six-county Hospital**—Six eastern Washington counties have joined for the construction of a tuberculosis hospital at Selah. The T-shaped, 6-story and basement structure will have a 47x260-ft. front and a 54x115-ft. wing section. It will be of concrete construction with brick exterior and stone trim, in accordance with plans prepared by John W. Maloney, of Yakima, architect. The entire structure will be air-conditioned and recreation rooms on the sixth floor will be surrounded by glass windows and doors. A $2,114,593 contract has been awarded to the General Construction Co. of Seattle.*

Issue airport bonds

First legal step toward a long-range, $9,000,000 improvement program at Weir Cook Municipal Airport was taken last week by the Indianapolis Board of Aviation Commissioners, when they requested the city comptroller to issue $2,000,000 in bonds as the city's contribution to the first phase of the plan.

This phase will include construction of a new 5,170-ft. east-west runway on the south side of the field; a new 6,100 ft. southwest-northeast runway, paralleling one now in use; paving of plane ramp spaces around the existing administration building, and construction of the first unit of a new administration building immediately north of the present entrance road.

City engineer returns

James Girand, formerly city engineer and once superintendent of the Phoenix, Arizona, Water Department, last week had been named superintendent of the Water Department for a second time. He held the post previously from 1932 to 1934, and served as city engineer for a four-year period beginning in 1936.

Mr. Girand succeeds Darlo Travaini, superintendent of the municipal sewage disposal plant, who acted as temporary bureau chief following the discharge of the former superintendent, after the disclosure that a meter reader had been guessing at bills, and that water consumption had been underestimated. Corrected bills brought complaints from consumers.

Electricity from reservoir

Electricity for lighting buildings at Quabbin Reservoir, a part of the Boston, Mass., water supply system, and for all power needs of the reservation surrounding the lake, will be provided by the release of water from reservoir itself, according to a recent decision of the Metropolitan District Commission.

Objections by the State of Connecticut to the use of all of the water in the reservoir for Massachusetts led to a recent federal order that the district must release 20 mgd. into the Swift River, a tributary of the Connecticut River.

ROAD ODE

C. P. Ward, Inc., contractors of Rochester, N. Y., have attracted considerable attention by using rhymes on their "men working" road signs. Taking considerable liberty with poetic license two of the signs read:

"If you'll go slow
"Then we'll work fast
"To bring you all
"More electric and gas"

"The project ahead
"Will slow you down
"But it's more electricity
"For our town"

Motorists DO slow down—if only to read the signs.

Georgia halts negotiation of road contracts

Gov. M. E. Thompson of Georgia has ordered the State Highway Department to stop negotiating road construction and maintenance contracts except in emergencies, following the revelation that the department has been negotiating almost half of its contracts instead of advertising for bids on them.

Many of the negotiated contracts were let during the hectic political campaign in the summer of 1946.

A number of the negotiated contracts were with counties for local roads, and investigators pointed out it was necessary to negotiate these contracts, since there are no competitive bidders. Largest contracts let to counties were $584,378 to Coweta County; $124,000 to Taylor County; $114,000 to Seminole County; $110,000 to Brooks County; $103,173 to Jackson County, and $72,000 to Cobb County.

Seek engineer aides for reclamation work

The Bureau of Reclamation said last week that it needs several hundred additional engineers and scientists in its western field offices to bring its design and construction forces to the strength needed to fulfill the construction program now under way.

Principal demand is in the Missouri River Basin states, where the bureau has congressional mandates to start construction of ten new dams during the coming fiscal year. In addition, recent decentralization of engineering services formerly performed at Denver, Colorado, has brought a need for qualified personnel to man the 25 field design offices now being established.

To pipe natural gas 470 miles, N. M. to Calif.

Pacific Gas & Electric Co. has announced terms of a preliminary agreement with the El Paso Natural Gas Co. for purchase of natural gas that the El Paso firm proposes to pipe 470 mi. from San Juan County, N. M., to Needles, Calif. PG&E would build a 500-mi. connecting line from Needles to the San Francisco Bay area.

The El Paso company made application to FPC late in August for permission to build the San Juan line and supplementary facilities at an estimated cost of $55,000,000. The line would be scheduled for completion Jan. 1, 1952.

LOST TUNNEL FOUND

Reported as lost in news accounts several weeks ago, an abandoned utility tunnel under the Chicago River has been found by the city's Department of Subways and Superhighways. It will be plugged and backfilled to eliminate a threat to the safety of hand mining for a future westward extension under the river of the Congress St. Subway.

Old records showed the tunnel lying in the path of the eastbound tube of the subway extension. Location of the tunnel's covered-over westerly shaft was fairly well known, but straightening of the river in years past had cut off the easterly shaft and submerged the stub. The subway department established an approximate location for the shaft by a survey, tied into former dock lines, and then dredged the river bottom at the selected site. After a long hunt, a diver found the stub.

The city plans to put a cofferdam around the stub, plug the shaft and drain the tunnel in preparation for bulkheading and backfilling.

With bulkheads and backfill in place, the lost tunnel will no longer menace the planned subway extension.

Plan sewer lines under Penna. rivers

Preliminary plans for huge interceptor sewers, placed in the beds of the four rivers that cross Allegheny County (Pittsburgh) Pennsylvania in an unusual engineering project have been presented to the U. S. Army Engineers by the Allegheny County Sanitary Authority.

John F. Laboon, chairman of the authority, said that the river-sewers would constitute the main collecting system for a treatment plant to be constructed on the Ohio River below Pittsburgh. This plant, planned to serve 100 municipalities in addition to industrial organizations that will make use of the authority facilities, would handle 250 mgd. Mr. Laboon said that putting the 12 ft. diameter sewers in the river beds would eliminate extensive property damage; tearing up of streets; interference with utilities.

Twelve pumping stations would be provided to move the sewage, since there is insufficient grade in the river bottoms to permit gravity flow. Mr. Laboon said that the engineering procedure for placing the mains would include dredging of a channel in the river bottom; driving piles; lowering of pre-cast concrete cradles, and finally placing of pre-cast concrete pipes in yokes.

Shelve plans for tunnel under Cascade Mountains

Plans for the construction of a $20,000,000 highway tunnel through the Cascade Mountains east of Seattle, Wash., finally have been shelved, following an independent survey of possible revenues by a New York engineering firm.

The tunnel, originally recommended to the 1947 Legislature by Ole Singstad, New York tunnel expert, was rejected by the legislature on the ground that the expense was greater than the possible traffic through the tunnel would warrant. Governor Mon C. Wallgren, an ardent advocate of the tunnel, suggested some months ago (*ENR* May 29, Vol. p. 868), that the tunnel might be built by an authority which would float bonds to finance construction. Private investors engaged the New York engineering firm of Coverdale & Colpitts to investigate anticipated revenues in the event that the tunnel was built. A recent report indicated that prospective tolls would not be sufficient to liquidate the debt on the bore.

Colorado Tunnel delayed by lack of bidders

Plans for an early start on the construction of the first phase of the Loveland Pass auto tunnel through the Rockies west of Denver, Colo., faded last week when the Colorado Highway Department announced it had received only one bid on the project. Under department rules, the single bid—submitted by Western Contracting Corp., of Sioux City, Ia.—could not be opened. The advertised job called for 2,000 ft. of tunnel, which will eventually be more than a mile long.

High costs postpone Nueces River project

A report recommending that no authorization be sought at this time for the Bureau of Reclamation to develop the irrigation and related water resources of the Nueces River Basin and adjoining coastal areas in Texas, has been officially transmitted to Congress by Secretary of the Interior J. A. Krug.

The secretary pointed out in letters to both branches of the Congress that he had approved findings that farmers would be able to repay only a very small portion of the project costs.

The Bureau of Reclamation ascertained that development of the Nueces Basin project outlined in the report would cost about $81,500,000.

Transit body takes over Chicago lines

At 12:01 a.m. Oct. 1, the Chicago Transit Authority took over the physical properties of the Chicago Surface Lines and the Chicago Rapid Transit Co. and began operation of a unified transportation system. The physical change-over followed by less than 24 hr. the taking of title to the two properties by the transit authority.

Purchase price of the two privately owned transportation systems was slightly in excess of $87,000,000—$75,000,000 to the Chicago Surface Lines and $12,162,500 to the Chicago Rapid Transit Co. as compared with a combined book value of $268,000,000. Money to pay for the two properties came out of a $105,000,000 issue of revenue bonds bearing an average interest rate of 3.59 percent. A syndicate of investment bankers on Aug. 5 made a proposal for selling the bonds. The proposal was accepted, and the issue was oversubscribed.

Its broad powers and exceptional autonomy make the Chicago Transit Authority unique among transit bodies in the United States. Created by act of the Illinois general assembly in 1945 and approved by referendum of the people of Chicago in the same year, the authority enjoys complete, independent control over fares and service. It is required by law to keep its operations financially stable, but it does not have to apply to a state regulatory body for rate changes.

Authority cannot levy taxes

The authority is specifically prohibited from levying taxes. Although it has no taxing power, it does have the authority to refund its outstanding bonds, and there is a possibility that it can refund its present issue at a lower rate of interest after it has acquired an operating record. The law specifies its business to be that of operating a unified transportation system for the metropolitan area at cost.

Its territory embraces most of Cook County, including 85 communities outside the city limits of Chicago. The authority already has taken the first step in a program to unify the transit services in this area.

Three main lines of endeavor are included in the authority's program for coordinating and improving public transportation in the metropolitan area. Plans already are in motion: (1) to rehabilitate and improve the existing rapid transit and surface lines in Chicago, (2) to acquire existing surface transportation companies, both urban and suburban, operating bus routes principally, and integrate them into the unified system, and (3) to coordinate the transportation system with steam and electric suburban services by negotiating for joint use of facilities, transfer exchanges and other aids to the traveling public.

In all, the authority plans for the rapid transit and surface lines a ten-year rehabilitation and improvement program costing $150,000,000. A major part of the new equipment purchases will be for buses, in accord with a decided shift to rubber-borne transportation. The program calls also for purchase of 500 new 90-ft. subway-elevated cars, equivalent to 1,000 of the present cars, and rehabilitation of the elevated structure, stations, garages and shops. The authority will completely signal the subway-elevated system, at present only partly equipped with signals. Some new streetcars also will be purchased.

Annual business, $100,000,000

The two properties taken over by the Chicago Transit Authority on Oct. 1, do an annual business of nearly $100,000,000, carrying about 1 billion passengers per year. Included in the system now operated by the authority are 1,092 single-track miles of streetcar lines, 170.8 single-way track miles of rapid transit railway (exclusive of trackage in the city-owned subways), 59 miles of overhead trolley routes for electric motor buses, and 429 single-way miles of bus routes. The authority began its operation with a 10c fare on the surface lines, 1c higher than the fare previously charged, and a 12c fare for the rapid transit division, a charge which had been in effect for some time under private ownership. Transfer privileges under the new system are greatly broadened and are less expensive to the traveling public than under the old divided ownership.

The administrative agency responsible for operations of the authority is the Chicago Transit Board, composed of seven members, four appointed by the mayor and three by the governor of the state. Chairman of this board is Philip Harrington, former commissioner of subways and superhighways, who has been most active in developing the plan for unified public transportation in Chicago. The unified system operates under a single general manager, Walter J. McCarter, formerly general manager of the Cleveland transit lines, which became a publicly owned system during his regime.

***Plan for United Nations**—Among the many problems to be brought up on the agenda of the general assembly of the United Nations in New York City is final approval of plans for a permanent home for the World Organization, to be built on a site facing the East River, in midtown Manhattan. To aid in visualization of the plans, which will probably entail expenditure of nearly $50,000,000, a 10-man Board of Design Consultants presented the scale model shown above for approval by the delegates attending the assembly meeting. Predominant feature of the headquarters site will be the widespread use of glass and marble, even for the 44-story secretariat building (at right in model) which will give, architect said, the appearance of a solid glass block against the skyline. The convex general assembly hall will be at the center of the site below the secretariat building. At the left is a model of a Delegation building, not yet approved.*

MEN AND JOBS

W. C. Williams has been promoted to first assistant state highway engineer of Oregon and **William W. Stiffler** to second assistant highway engineer. Williams formerly was in charge of the Portland district, while Stiffler was in the Salem office.

Ray L. Derby has become head of the sanitary engineering division of the Los Angeles, Calif., Department of Water and Power. Mr. Derby has been with the utility since 1933 and was assistant sanitary engineer. After receiving a degree in civil and sanitary engineering at the University of California, he worked for the state department of public health and for several consulting firms on the design of filter plants. From 1941 to 1944 he served in the Army with the rank of major.

Col. Heston R. Cole, district Army engineer at Duluth, Minn., has been named district engineer at Wilmington, N. C., succeeding **Col. John B. Hughes,** who has been serving for some time as acting district engineer.

W. Clark Root, for the last nine years associated with the Shell Co., Wood River, Ill., and recently named assistant manager of the company's utilities department, has been appointed a structural engineer in the physical plant department, University of Illinois. Mr. Root was graduated from the department of civil engineering, University of Illinois in 1933.

Herman F. Lucke, Jr., former city building engineer, has been elected associate engineer for the Baltimore, Md., parks. Mr. Lucke, who recently headed a special engineering group in a study of possible sites for a new municipal stadium, will be in charge of designs for park improvements and supervise such improvements.

Frank B. Hayes, Umatilla County engineer at Pendleton, Ore., and **Elmo Robnett** of Milton, Ore., have formed a new engineering firm under the name of Hayes & Robnett, with offices at Milton and Pendleton. Hayes will continue in his county position. Robnett has been with the Public Roads Administration, Oregon Highway Department and Morrison-Knudsen Co., Inc., while Hayes has been active in engineering work for 34 years, most recently as Pendleton city engineer.

John E. Hayes has resigned as city engineer at Twin Falls, Idaho, and has been replaced by **John S. Differ**, Jr., who is to be assisted by Mr. Hayes until completion of a $200,000 city sewer project.

Jacques Sansfacon, a civil engineer of Beauharnois, Que., has been named assistant city engineer at Shawinigan Falls, Que.

Ray Cavendish, veteran of 27 years experience in West Virginia highway construction and maintenance, has been appointed road commissioner succeeding **E. L. Worthington,** who resigned to accept a State Department assignment in Greece. The new commissioner has been with the commission continuously since 1933. Before that he worked for it for two years and for the Kanawha County engineering department for 12 years, during a decade of the former as office and construction engineer. He was appointed state maintenance engineer in February, 1946, and in that office directed approximately 4,800 of the Commission's 5,000 employees.

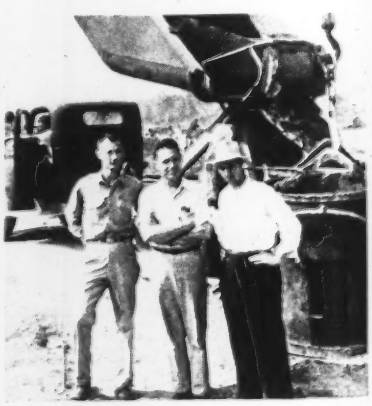
R. Cavendish

Calvin V. Davis, former regional vice-president of the Frederic R. Harris Engineering Corp. at Knoxville, Tenn.

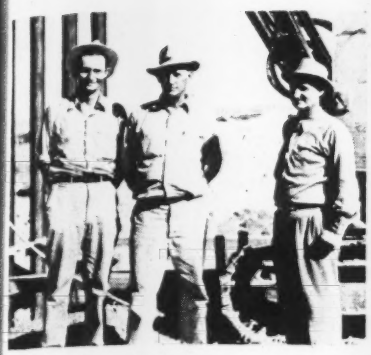
H. J. Spelman (left) division engineer for PRA at Arlington, Va., and Wilbur H. Simonson (right) principal landscape architect for PRA, pose with J. S. Narasimham, civil engineer of Secunderabad, India, now studying advance highway engineering at Iowa State University.

Left to right: Fred Rowe, partner and general manager; Ralph Beerbower, construction superintendent, and L. P. Theil, electrical superintendent, for the W. L. Johnson Construction Co. of Columbus, Ohio, oversee the paving of a 300 x 10,000-ft. runway at the Army's Patterson Field.

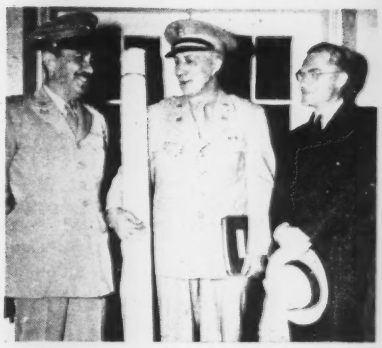
A street paving job in hilly Aliquippa, Pa., brings together (left to right), William Sprague, superintendent of construction for Kean-Wise Construction Co., the contractor; and G. F. Berkemeyer, resident engineer for Morris Knowles, Inc., Pittsburgh, consulting engineers.



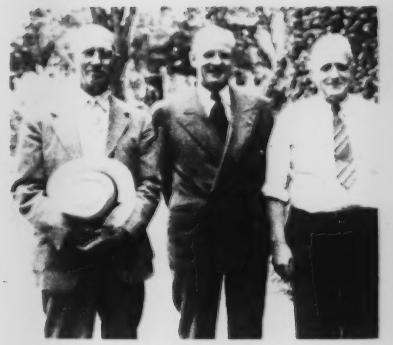
A. L. Irmscher (left) is project engineer for the Dayton, Ohio, Power and Light Co.; O. L. Deweese is superintendent of construction and R. T. Douglas is an engineer for the contractor, Maxon Construction Co., on a steam power plant construction job near Miamisburg, Ohio.



C. W. Johnson, (left) project engineer for the New Mexico Highway Department; Frank Dobesh, bridge superintendent for D. D. Skousen, contractor, and Lee Campbell, assistant bridge engineer for the department confer on construction of a bridge of Carrizo Creek, Springer, N. M.



Leaving the White House after flood control conferences with President Truman are, left to right, Lt. Gen. R. A. Wheeler, chief of Army engineers; Brig. Gen. Lewis A. Pick, Missouri River Division engineer, and Gordon R. Clapp, newly-appointed chairman of the Tenn. Valley Authority.



Civic improvements for Warren, Ohio, including a new source of water supply, get attention from these top officials. Left to right, W. S. Harvey, city engineer; Floyd E. Pardee, director of public service and safety, and Joseph C. Hapgood, superintendent of the city water department.

has become a partner in the Harza Engineering Co. of Chicago. He has gone to Argentina temporarily as representative of that company, not as an advisor to the Peron government, as stated in our issue of Aug. 28.

The designation of **William P. Price, Jr.,** to take charge of construction activities on the Canyon Ferry Unit of the Missouri Basin Project has been announced. Mr. Price was formerly head of the contract administration section of the construction engineering division, Office of the Chief Engineer, Denver, Colo.

W. P. Price

Mr. Price first entered the employ of the bureau in 1934, when he was assigned as an engineer to work on the Taylor Park Dam in Colorado. Early in 1938, he was transferred to the chief engineer's office and was active in the concrete dam design division. In the fall of 1939 he was transferred to work on the Friant Dam of the Central Valley Project in California. He returned to Denver in 1942 and was engaged in contract administration work until becoming the head of the contract administration section upon its initial organization. Mr. Price is a graduate of Colorado A & M College at Fort Collins, Colo.

F. D. Gifford, town engineer of Waterloo, Ont., has resigned.

John Lester, assistant engineer with the West Virginia State Water Commission, has resigned to accept a position at Belle, W. Va., with the E. I. Du Pont de Nemours organization. He will work on water treatment and stream pollution abatement problems for that company.

John H. Faber, Jr., of Morgantown, W. Va., has joined the West Virginia State Water Commission with the title of engineer. He is a graduate of West Virginia University.

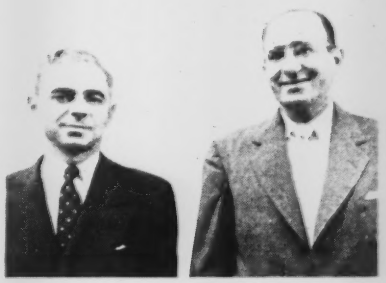
F. B. Robins has been appointed superintendent of the Wilmington, N. C., district of the Atlantic Coast Line Railroad, succeeding the late Lloyd Crocker. He has been serving recently as assistant to the general manager and formerly was chief of maintenance and repair section, transportation division, of the War Production Board.

William N. Long, a graduate of North Carolina State College, who for the last year has been working for the Navy in Charleston, S. C., has been named sanitary engineer of Person County, N. C., with headquarters at Roxboro.

George Charbonneau of L'Assumption, Que., has been appointed chief engineer for the Department of Roads with headquarters at Alymer, Que., with jurisdiction over the counties of Gatineau, Pontiac and Hull. Mr. Charbonneau replaces **Raymond Menard.**

Alexander Weaver, Sr., and **Alexander Weaver, Jr.,** of Greensboro, N. C., have formed a general engineering and contracting firm to be known as Buck Weaver and Son, general contractors.

William E. Hatch, civil engineer and land surveyor, will resume his practice at Hyannis, Mass., after having served as a visiting lecturer in civil engineering during the summer at the University of Illinois' Camp Rabideau, near Blackduck, Minn.



Morris Klegerman (left) senior member of the firm of Alexander Potter Associates, and F. L. Panuzio, principal engineer, N. Y. district, Corps of Engineers, pose during an inspection of the water supply dam at the U. S. Military Academy, West Point, N. Y. Mr. Klegerman made plans.

George E. Johnson, chief engineer and general manager of the Central Nebraska (Tri-County) Public Power and Irrigation District, has resigned to devote more time to other engineering activities.

A. Wolchok has been named vice-president and chief engineer of Corman Engineering Co., Ltd., Toronto, Ont.

Appointment of **John Stone,** of Glen Lyon, Pa., as a project engineer for the Scranton district of the Pennsylvania Highway Department has been announced. **Frank B. Cunningham,** of Indiana, Pa., has resigned as resident engineer.

ENGINEERING SCHOOL NEWS

Important changes in curriculum at M.I.T.—Highway conference at V.M.I.—Married students do well at R.P.I.—Mexican engineer is research associate at Illinois

Fundamental changes in the curriculum in civil engineering, which constitute a major advance in engineering education, were announced by Thomas K. Sherwood, dean of engineering at the Massachusetts Institute of Technology on Sept. 25, to become effective at once.

The new program was adopted after a study extending over two years during which John B. Wilbur, head of the department of civil and sanitary engineering, had the counsel of a number of the country's leading civil engineers.

The new curriculum recognizes the three phases of conception, design, and construction involved in every civil engineering project. All civil engineering students will take basic subjects in humanities, mathematics, science, mechanics and surveying, but in the middle of the third year, the student may pursue work adapted to his interests and abilities by electing one of three options.

Designed to prepare men for the planning and administration of civil engineering projects, including public works, is the planning and administration option, which also serves as a general course in civil engineering.

The theory and design option prepares men of outstanding technical promise for design, research, teaching, and for graduate work in either civil or sanitary engineering.

A third option, construction and management, prepares men for the supervision of engineering construction of all types, and for contracting.

By the proper choice of option and electives, the new civil engineering curriculum is also adaptable to the needs of students who are primarily interested in sanitary engineering, closely associated with civil engineering. Much of the institute's work in sanitary engineering is, however, conducted at the graduate level.

The functional approach makes it possible to offer civil engineering students a variety of important subjects not previously included in their program. Principles of conservation, urban sociology, and planning legislation and administration, for example, will be among the subjects taken by students in the planning and administration option. Advanced work in fluid mechanics, soil mechanics and structural theory will be offered in the theory and design option. Accounting, contract law, and business management are available in the construction and management option.

A special Virginia highway conference will be held at the Virginia Military Institute Oct. 31-Nov. 1. Jointly sponsored by VMI and the Virginia Department of Highways, the conference probably marks the beginning of an important annual event. The purpose is to provide an opportunity for the meeting of all city, county and state officials and engineers to exchange ideas and to discuss matters of mutual interest relating to road and street problems. Registration is expected to total 500. Announcement of the meeting was made jointly by Gen. R. J. Marshall, superintendent of VMI, and Virginia Highway Commissioner James A. Anderson. C. S. Mullen, chief engineer, is general chairman.

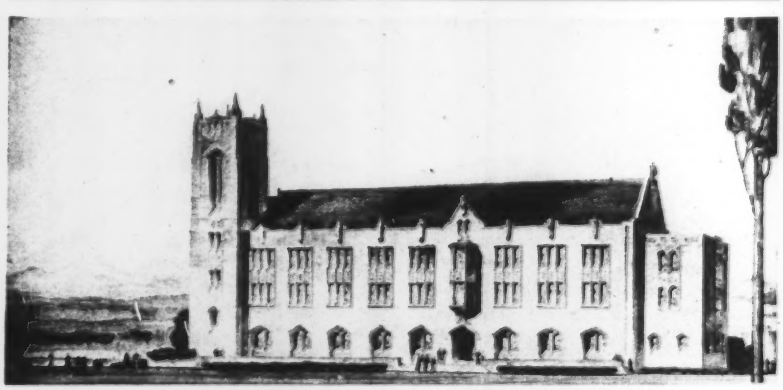
A study of the scholastic standings of married and single veterans studying at Rensselaer Polytechnic Institute shows that the married ones are topping the bachelors, R.P.I. officials report. The study was made because of the opinion among some educators that the responsibilities and distractions of married life—especially if there is a child or two—may interfere with the student's progress. There are 2,763 student veterans. Of this number 652 are married.

Leonardo Zeevaert, consulting engineer, Mexico, has been appointed a visiting research associate in civil engineering at the University of Illinois. His specialty is soil mechanics and foundation engineering. He took his degree in civil engineering from the University of Mexico in 1937 and served on bridge construction for the Mexican national highway commission. In 1940 he took the degree of master of science from the Massachusetts Institute of Technology and returned to Mexico as a consulting engineer. He also gave courses as part-time professor of soil mechanics and foundation engineering in the University of Mexico.

Set up mathematics lab for Bureau of Standards

A federal center of applied mathematics—the National Applied Mathematics Laboratories—has been established as a division of the National Bureau of Standards, according to an announcement by E. U. Condon, director of the bureau. John H. Curtiss who has been the director's assistant in applied mathematics at the National Bureau of Standards, has been named chief of the laboratories.

Organized to conduct research and provide services in the field of applied mathematics, the new organization is oriented around modern mathematical statistics as applied to the physical and engineering sciences and to the development and use of modern high speed computing. The Applied Mathematics Laboratories include four separate laboratories: the Institute of Numerical Analysis at Los Angeles, Calif.; the Computation Laboratory; the Statistical Engineering Laboratory; and the Machine Development Laboratory.



***Administration Building**—As the latest phase in an extensive building program, the University of Washington at Seattle has awarded contracts totaling $1,362,795 for construction of the administration building pictured above. General contract, for $1,094,277, was awarded to Strand & Sons. The architects are Victor N. Jones & Associates.*

OBITUARY

Walker Jay Weesner, 54, Indianapolis, Ind., engineer and architect died Sept. 22 at his home in that city. He was an employee of the Public Housing Authority in Washington, D. C. for the last six years.

L. J. Trotti, 65, director of antimalaria and rural sanitation for the Texas health department since 1935, died recently at Austin, Tex. He had done engineering work for a Mexican railroad, and at one time was a city commissioner of El Paso, Tex.

Maurice G. Townsend, 49, vice-president and manager of Parks-Cramer Co. of Charlotte, N. C., and a former president of the Charlotte Engineers Club, died Sept. 24. He was a graduate of the Massachusetts Institute of Technology.

Charles E. Haydon, 80, city engineer for several Texas towns during a long career, died at Denison Sept. 21. He became city engineer for Sherman in 1907. He later was city engineer for Texarkana, McKinney and Denison. In addition, he was chief of government field engineers at Little Rock, Ark., in 1917.

George W. Perry, 78, retired city engineer died Sept. 23 in Putnam, Conn. A graduate of Worcester Polytechnic Institute in 1890, he was for 10 years chief engineer for the Washburn & Moen Co. in Waukegan, Ill., a predecessor of the American Steel & Wire Co. In 1912 he was appointed city engineer in Putnam, a position he held until his retirement five years ago.

Henry N. Ogden, 79, professor emeritus of sanitary engineering at Cornell University, died at Ithaca, N. Y., Sept. 29. He studied civil engineering at Cornell and upon graduation in 1889 became a member of the faculty. He taught at Cornell for 49 years, retiring in 1938. He was a member of the N. Y. State Public Health Council from 1913 to his death.

Maj. Alfred Sparks Hirzel, 61, engineer in charge of construction for the street and sewer department in Wilmington, Del., from 1919 to 1925, died Sept. 28 in New Castle, Pa. A civil engineer, Major Hirzel served with various engineering firms, and with the U. S. War Department as engineer and the Baltimore and Ohio Railroad as field engineer. In 1926, he became manager of production for the Interstate Amiesite Co. Major Hirzel served on the Mexican Border in 1916 and 1917 as captain in the First Delaware Infantry, and became a major in the 59th Pioneer Infantry while in France in 1919.

Francis H. Davis, 79, retired engineer, died Sept. 12 in San Francisco, Calif. He made the survey for a proposed canal through Nicaragua and for a Universal Oil Co. pipeline from Lost Hills to Monterey, Calif.

William S. Earle, 71, civil engineer of Sanford, Fla., died there Sept. 30. He was at one time division engineer for the Florida State Road Department in charge of road work from Gainesville to Pensacola. During the war he was engineer on the construction of the Sanford Naval Air Station. For the last year he had been working with the city of Sanford on - St. Johns River project in connection with the construction of a new canal.

Morton Milne Gibson, civil engineer with the department of highways of Ontario for the last 10 years, died in Agincourt, Ont. on Sept. 9.

"Professional engineer" phone listing requested

The Associated Engineers of Spokane, Wash., have asked the Pacific Telephone & Telegraph Co. to eliminate all "engineer" classifications in its next directory except "professional engineers," a classification which would be limited to those holding state licenses.

All listings would be uniform and the special engineering group to which the engineer belongs would be indicated under his name.

MAJOR MEETINGS

American Society of Civil Engineers, fall meeting, Roosevelt Hotel, Jacksonville, Fla., Oct. 13-17.

National Metal Congress and Exposition, Palmer House, Chicago, Ill., Oct. 18-19.

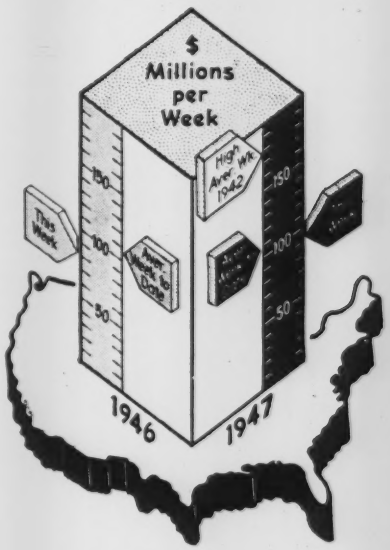
American Welding Society, annual meeting, Sherman Hotel, Chicago, Ill., Oct. 20-24.

Engineers' Council for Professional Development, 15th annual meeting, Mount Royal Hotel, Montreal, Canada, Oct. 24-25.

National Council of State Board of Engineering Examiners, 26th annual meeting, Hotel Pennsylvania, New York, N. Y., Oct. 27-29.

American Institute of Steel Construction, 25th annual convention, Roney Plaza Hotel, Miami Beach, Fla., Nov. 10-13.

CONSTRUCTION ACTIVITY



As Reported this week to . . .
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of Oct. 9 1947	Cumulative 1947 (41 wks)	Cumulative 1946 (41 wks)
Federal	$4,206	$509,328	$527,227
State & Mun.	43,958	1,361,496	1,155,874
Total Public.	$48,164	$1,870,824	$1,683,101
Total Private	44,819	2,495,373	2,591,460
U. S. Total.	**$92,983**	**$4,366,197**	**$4,274,561**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1947 (41 wks)	Cumulative 1946 (41 wks)
Waterworks	$4,185	$87,187	$91,042
Sewerage	2,906	108,327	90,163
Bridges	10,189	146,822	108,093
Highways	14,701	634,677	634,221
Earthwork, Waterways	2,511	240,773	290,808
Buildings, Public.	11,404	452,403	336,048
Industrial	15,122	699,088	842,238
Commercial ..	27,627	1,454,381	1,578,880
Unclassified	4,338	542,539	303,068

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings, $205,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1947 (41 wks)	Cumulative 1946 (41 wks)
NON-FEDERAL	$1,839,846	$1,243,696
Corporate Securities	642,886	357,098
State and Municipal	949,249	661,598
Fed. Aid Highway.	247,711	225,000
FEDERAL	818,729	1,714,695
Total Capital.....	**$2,658,575**	**$2,958,391**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost.	Oct. '47	424.41	204.01
Building Cost....	Oct. '47	320.58	173.30
Volume	Sept. '47	255	112

CONSTRUCTION REPORTS

Bids Asked—Low Bidders—Contracts Awarded

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager — *J. A. MAHONEY, Reports* — *E. R. BIGGERSTAFF, M. R. ROESSLER, Statistics*

WATER SUPPLY

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked October 14

Va., Portsmouth—Norfolk Co., watermain exten. to Money Point area and 500,000 gal. reservoir. Plans deposit $10. P. D. Freeman, 201 Adams Bldg., Norfolk, engr. CD 12/10/45—ENR 1/3/46.

Alta., Prevost — Underwood & McLellan, engrs., 502 Grain Bldg., Saskatoon, Sask., approx. 11,000 ft. watermains, booster pumphouse, 100,000 gal. concrete storage tank for Village. Approx. $46,000. CD 12/21/45—ENR 1/10/46.

Bids Asked October 15

Ga., Lagrange—City, 32,000 ft. 20 in. c.i. supply line from the Chattahoochee River to city. Over $22,500. Wiedemann & Singleton, C. & S. National Bank Bldg., Atlanta, engrs. Plans deposit $15.

Bids Asked October 16

Wash., Spokane—City, City Hall, drilling 4 wells for pump. station at Parkwater. $106,000. E. James, water supt. CD 2/13/45—ENR 3/8/45.

Bids Asked October 17

Ga., Jasper—City, water distr. sys. John J. Harte Co., Forsyth Bldg., Atlanta, engrs.

Bids Asked October 18

Neb., Brule—City, WW sys. $38,101. Henningson Eng. Co., Standard Oil Bldg., Omaha, engr.

Bids Asked October 20

N. M., Hot Springs—City, 1 m.g. (alt. 1½ m.g.) steel standpipe set in concrete foundation, $30,000. Plans deposit $5.; WW sys., imprvs., extens., $70,000. Plans deposit $20. Classen & Rowland, 412 Martin Bldg., El Paso, Tex., engrs.

Ore., Cottage Grove—City, City Hall, 12 mi. 14 in. steel pipeline exten. from city reservoir. $400,000. Plans deposit $15. Stevens & Koon, Spalding Bldg., Portland, engrs. CD 10/9/46—ENR 10/31/46.

Bids Asked October 21

Ala., Jackson—City, WW sys. Over $22,500. Plans deposit $10. Donald Mills, P.O. Box 534, Selma, engr.

Ill., Olney—City, City Hall, constructing 2½ m.g.d. water treatment plant, imprv. supply and distr. sys. Caldwell Eng. Co., 803 W. College Ave., Jacksonville, engr. CD 5/29—ENR 6/12.

Okla., Oklahoma City—City, ten million gal. steel water storage tanks, N.W. 50 St. and Portland Ave. $600,000. Plans deposit $10. V. Long & Co., Colcord Bldg., engrs. CD 3/7/46—ENR 3/21/46.

Bids Asked October 22

Wis., Wrightstown—City, river crossings. Foth & Porath, Inc., 409 E. Walnut St., Green Bay, engrs. CD 5/27—ENR 6/5, under LB.

Bids Asked October 23

Mass., Boston—Commonwealth of Mass., Metropolitan Dist. Comn., 29 Somerset St., constructing tunnel section-Hultman Aqueduct in Boston and Newton, Weston and Brookline, Contr. 115, incl. excavating 4.7 mi. tunnel 12 ft. finished inside diam. and 0.6 mi. 10 ft. inside diam., lining with concrete; constructing Shaft 7A-240 ft. deep and making water connections. Plans deposit $20. Karl R. Kennison, ch. engr. CD 5/12/44—ENR 6/1/44.

Bids Asked October 27

Tex., Llano—City, M. C. Dalchau, mayor, WW imprvs., incl. relocation river pumps and constructing water treatment plant. $45,000. Fred E. Hess, Inc., 2212 Fort Worth Natl. Bank Bldg., Fort Worth, archt. CD 9/17—ENR 9/19.

Bids Asked October 30

Fla., Miami—City Dpt. Water & Sewers, 27 N.W. 2 St., water treatment plant addns.

Bids Asked October 31

●**O., Cleveland**—City, City Hall, Nottingham Water Intake at Wildwood Park on Lake Shore Blvd., incl. 17,240 ft. 10 in. concrete or steel pipe intake, submerged crib, short shaft structure, small breakwater, overflow conduit and necessary appurtenances. Over $1,000,000. Havens & Emerson, Leader Bldg., engrs. CD 8/6—ENR 8/21.

Bids Asked November 3

Md., Cumberland—At office City Clk., City Hall, auxiliary watermain from Lake Gordon to Cumberland. Plans deposit $25. R. L. Rizer, city engr. CD 1/22/46—ENR 2/2/46.

Wis., Wisconsin Rapids — Waterworks & Lighting Comn., pumping station and reservoir. Foth & Porath, Inc., 409 E. Walnut St., Green Bay, engr. CD 6/18—ENR 6/26, under LB.

LOW BIDDERS

Calif., San Francisco—Pub. Utilities Comn., City Hall, Sept. 30, sluiceway and misc. work at Lower Cherry Aqueduct Hetch Hetchy, Tuolumne Co., Spec. 200, from Moe Chevreaux, Box 65, Station A, Auburn. **$62,409.** CD 9/22.

Md., Hyattsville — Washington Suburban Sanitary Comn., Hyattsville, Sept. 26, Contr. 395-W, furnishing four thousand ⅝ in., one hundred ¾ in., twenty-five 1 in. and fifteen 1½ in. disc. water meters, from Badger-Meter Mfg. Co., 2371 N. 30 St., Milwaukee, Wis. **$56,471.** CD 9/19.

Tex., Dallas—City, Earl Goforth, secy., Aug. 18, c.i. watermains in Caruth Hills, from E. O. Dalton & Co., Great Natl. Life Bldg., **$23,216;** c.i. water and sanitary sewer lines, in Peacock Terrace 2, from Ben Sira & Co., 3901 Elm St., **$46,199.** CD 12/13/45—ENR 12/27/45.

Tex., Houston—Harris County Water Control & Imprvt. Dist. 9, Courthouse, WW sys. addns., from Donathan & Witmer, 1118 California St. **$84,656.** CD 3/28—ENR 4/17.

●**Tex., Marshall**—City, Sept. 25, from M. F. Fisher & Son, 203 Fredericksburg Rd., San Antonio, 20 and 24 in. c.i. supply watermains, (1), 24 in. c.i. main, **$1,006,200;** (2), 24 and 20 in. combination c.i. mains, **$955,877;** (3), 20 in. main, **$803,040;** filter plant and pipe work, **$323,563;** from Enix Constr. Co., Lamesa, pumping plant, **$125,750.** CD 9/9—ENR 9/11.

CONTRACTS AWARDED

Ark., Hot Springs—City, compacted earthen dam and clear lake area, control tower and conduit, spillway on Bull Bayou, near here, to Clark & Farrell Constr. Co., Brinkley. **$398,555.** K. W. Lefever, Gazette Bldg., Little Rock, engr.

Ga., Blairsville—City, WW sys., to M. G. Aldridge, Macon. **$34,547.** Bids 9/30. CD 9/24.

Mich., Grand Rapids—City Comn., watermain, connections in Cherry St. from Ottawa to Jefferson Sts., to Van Orden & Van Ess, 518 Murray Bldg. **$54,377.** CD 7/8.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks $22,500; other public works $40,000; industrial buildings $55,000; other buildings $205,000.

Classes of Construction

(Name in order of Listing)

Water Supply	Latin America
Sewers, Waste Disposal	Public Buildings
Bridges	Commercial Buildings
Streets & Roads	
Earthwork, Waterways	Industrial Buildings

Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

♦	Federal Government
●	Project of $1,000,000 or over.
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily

Mich., Monroe—City, furnishing, erecting 1 steel watertanks, one 500,000 gal. and other 50,000 gal. capacity, to Pittsburgh-Des Moines Steel Co., 1218 First National Bank Bldg., Chicago, Ill. **$99,900.** Shoecraft, Dreary & McNamee, Ann Arbor, engrs. CD 7/22—ENR 7/24.

Md., Annapolis—Office of Mayor and Alderman, City Hall, water sys., Contr. C, incl. water treatment plant addns., alterations, incl. 2 concrete, brick well houses, concrete coagulating tank-flask and floculating mixing equip., sludge collecting equip., approx. 1,200 lin. ft. 20 in. c.i. pipe, modifications filter plant piping, etc., to Vanguard Constr. Corp., 366 Lexington Ave., New York, N. Y. **$239,670.** Whitman, Requardt & Assoc., 1304 St. Paul St., Baltimore, engrs.

Neb., Omaha—Metropolitan Utilities Dist., 24 and Harney Sts., watermain extens., own forces. **$617,000.** CD 2/12—ENR 3/6.

Tenn., Memphis—Memphis Light, Gas & Water Div., 14 m.g. water reservoir, to Sam P. Maury Constr. Co., 1970 Crump Ave. **$696,699.** CD 9/25—ENR 10/2, under LB.

Va., Martinsville — City, water filtration plant, to L. S. Showalter, Lynchburg. **$195,148.** CD 9/9—ENR 9/11, under LB.

Wash., Seattle—Water Dist. 27, 1164 Empire Bldg., Zone 4, watermains in LID 27, to Matt Malaspina, 1901 23 Ave. S. **$60,934.** Bids 9/11. E. F. Hughes, County-City Bldg., engr.

Wyo., Basin—City, concrete reservoir, to Gordon W. Sykes, Basin. **$30,000.** Bids 9/22. H. S. Nixon, Grain Exchange Bldg., Omaha, Neb., engr.

Ont., Port Arthur—City, A. H. Evan, clk. and Port Arthur Pub. Utilities Comn., R. B. Chandler, mgr., 2 m.g. reservoir, to Claydon Co. Ltd., 16 Victoria Blk., Fort William. Approx. **$111,115.** Bids 8/28. CD 8/15—ENR 8/21.

Ont., Toronto—Toronto Twp., J. H. Pinchin, clk., 18,000 lin. ft. 6 in. watermains, to Dundas Constr. Co., 28 Grove Ave. Approx. $55,000. Bids 7/8. Gore & Storrie, 1130 Bay St., engrs. CD 7/1.

SEWERS, WASTE DISPOSAL

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked October 13

N. Y., Syracuse—Onondaga Co. Purchasing Agent Pub. Wks. Comn., County Courthouse, zone 2, exten. 5,760 lin. ft. 30 in. Ley Creek sanitary sewers Donald St. to Lemoyne College; approx. 1,250 lin. ft. 30 in. Beartrap trunk sewer, Ley Creek Plant to Gould Pk. Plans deposit $10 each.

Bids Asked October 14

Wis., Wauwatosa — Metropolitan Sewerage Comn. of Milwaukee Co., Milwaukee, Zone 1, special section concrete sewer through rock. $175,000. Plans deposit $5. J. L. Ferebee, ch. engr.

Alta., Provost—Underwood & McLellan, engrs., 502 Grain Bldg., Saskatoon, Sask., 10,000 ft. sewer mains, concrete sewage treatment plant, for Village. Approx. $50,000. CD 12/21/45—ENR 1/10/46.

Bids Asked October 17

Md., Hyattsville — Washington Suburban Sanitary Comn., Hamilton St., Northwest Branch Trunk Sewer approx. 5,110 ft. 30 in. rein.-con. and c.i. sewers. Plans deposit $5.

Bids Asked October 20

Calif, San Leandro—City, City Hall, domestic and industrial sewer lines in West Ave. 132 from Shoreline Blvd. to Orpheus St. $40,000. Plans deposit $10. Charles Martin, City Hall, city engr. CD 11/26/45—ENR 12/13/45.

Mich., Lincoln Park—John M. O'Connor, city clk., Lincoln Park, 2 storm water pump stations with connections, appurtenances, furnishing, installing 4 electric motors, 125 to 300 hp. and two 15 hp. motors, lighting equip., etc. Plans deposit $10 each. Pate & Hirn, 532 Michigan Bldg., Detroit, engrs.

Wis., Wauwatosa — Metropolitan Sewage Comn. of Milwaukee Co., main sanitary sewer in Grantosa Dr., 1,450 ft. 36 in. vitr. clay sewer in earth excav., 455 ft. 36 in. vitr. clay sewer in rock excav., 34 ft. standard manholes, 21 ft. drop manholes. $75,000. Plans deposit $5. J. L. Ferebee, ch. engr.

Bids Asked October 21

Ala., Jackson—City, sanitary sewer imprvs. Plans deposit $10. Donald Mills, P.O. Box 534, Selma, engrs.